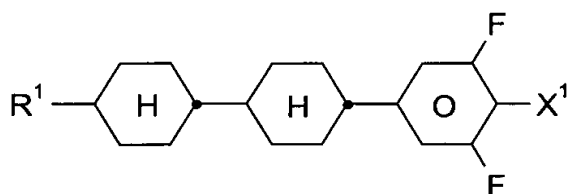


Patent Claims

Sub
A₁ 1.

A liquid-crystalline medium of positive dielectric anisotropy, which comprises one or more compounds of the formula I



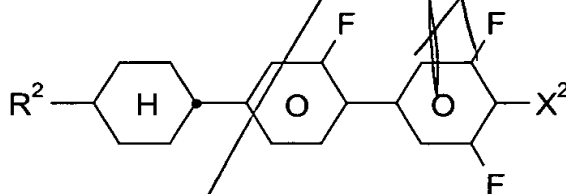
I

in which

R¹ is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

X¹ is F, OCF₃ or OCHF₂;

one or more compounds of the formula II



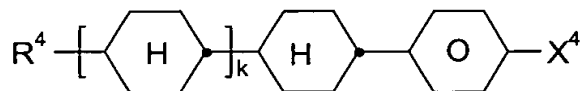
II

in which

R² is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

X² is F, OCF₃ or OCHF₂; and

one or more compound(s) of the formula IV



IV

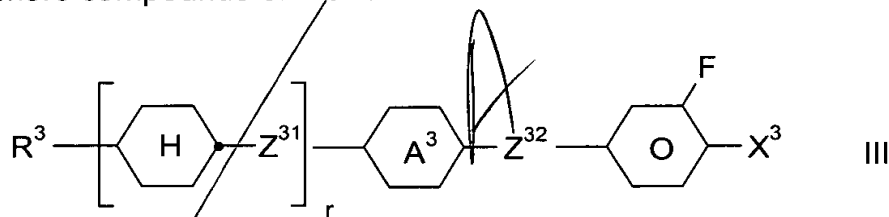
in which

R^4 is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively,

X^4 is F, Cl, OCF_3 or OCHF_2 , and

k is 0 or 1.

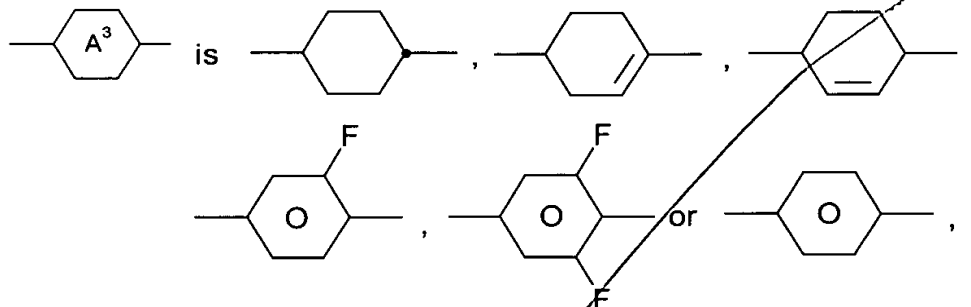
2. The medium according to Claim 1, which further comprises one or more compounds of the formula III



in which

R^3 is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively,

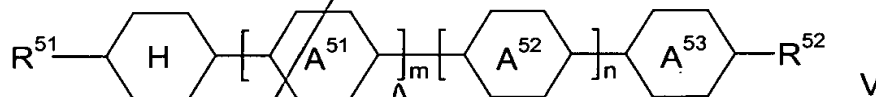
Z^{32} and, if present, Z^{31} are each, independently of one another, $-\text{CH}_2-\text{CH}_2-$, $-\text{CH}=\text{CH}-$ or a single bond,



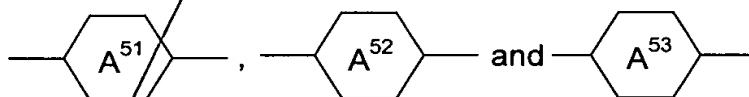
X^3 is F, OCF_3 or $OCHF_2$, and

r is 0 or 1.

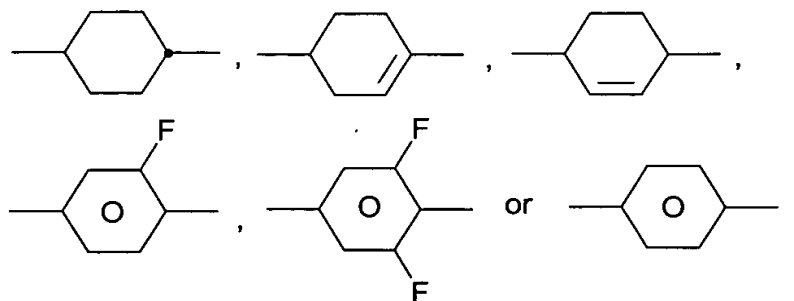
3. A medium according to Claim 1, which further comprises one or more compounds of the formula V



in which



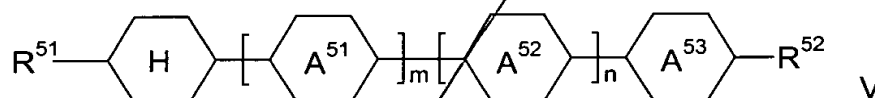
are each, independently of one another,



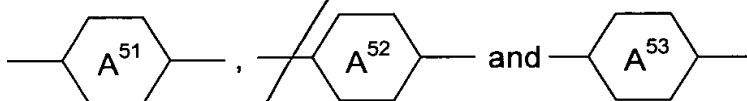
R^{51} and R^{52} are each, independently of one another, an alkyl, alkoxy or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

n and m are each, independently of one another, 0 or 1.

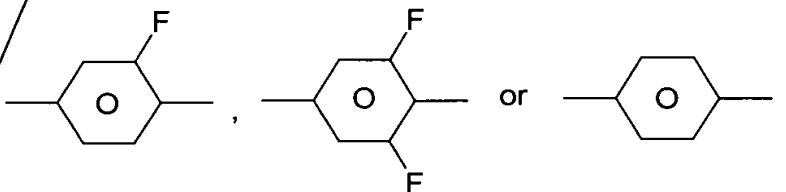
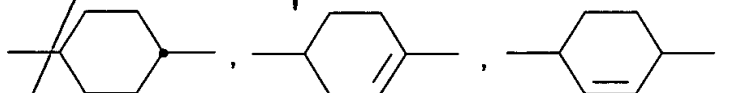
4. A medium according to Claim 2, which further comprises one or more compounds of the formula V



in which



are each, independently of one another,



R^{51} and R^{52} are each, independently of one another, an alkyl, alkoxy or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

n and m are each, independently of one another, 0 or 1.

5. A medium according to Claim 1, wherein the proportion of compounds of the formula I in the medium as a whole is at least 5% by weight.
6. A medium according to Claim 4, wherein the proportion of compounds of the formulae II to V together in the medium as a whole is from 40% to 90% by weight.
7. A multibottle liquid-crystal system which comprises a medium according to claim 1.
8. An electro-optical device which comprises a liquid-crystalline medium of claim 1.
9. A medium according to claim 4, which consists essentially of compounds of the formulae I to V.
10. A medium according to claim 1, which exhibits a nematic phase at least down to -20°C and at least above 75°C , a birefringence value of ≤ 0.090 or ≥ 0.100 , and a rotational viscosity, γ_1 at 20°C , of $160\text{mPa}\cdot\text{s}$.
11. A medium according to claim 4 which comprises a concentration of 3-65% compounds of the formula I, 3-40% of compounds of the formula II, 2-50% of compounds of the formula III, 10-50% of compounds of the formula IV and 0-30% of compounds of the formula V.
not optional
12. A medium according to claim 4, which comprises more than 50% of compounds of the formula I to V.
13. A medium according to claim 4 which comprises more than 90% of compounds of the formula I to V.
14. A medium according to claim 2, which consists essentially of compounds of the formula I to IV.

15. A medium according to claim 1, wherein, in formula IV, X^4 is F or OCF_3 .

Add
A2

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